

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Inventor: Akihiko NISHIO et al.

Art Unit 2617

Appln. No.: 10/540,401

Exr. M. Khan

Filed: June 23, 2005

Conf. No. 9722

For: RADIO COMMUNICATION APPARATUS AND RADIO COMMUNICATION  
METHOD

RESPONSE UNDER 37 CFR § 1.111 AND  
SUMMARY OF SUBSTANCE OF PERSONAL INTERVIEW

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In response to the Office Action dated January 8, 2009, the Applicants respectfully request reconsideration and allowance of the above-captioned application in light of the following remarks.

At the outset, the Applicants wish to thank the examiner and his supervisor for the courtesy extended to one of Applicants' representatives during a personal interview conducted on March 31, 2008. The participants in the interview were Examiner Khan, SPE Corsaro, and David Ward, Reg. No. 45,198. During the interview, the Applicants' representative presented the

following comments on the pending rejections noted below. No agreement was reached regarding patentability.

Claims 19-27 stand rejected, under 35 USC §103(a), as being unpatentable over Frodigh et al. (US 5,726,978) in view of Terry (US 2004/0009786). The Applicants respectfully traverse these rejections as follows.

Claim 19 defines a radio communication apparatus that: (1) selects a plurality of received OFDM subcarriers of higher reception quality, (2) generates one channel quality indicator (CQI) representing the reception quality of all the selected subcarriers, and (3) reports the generated CQI and information indicating the plurality of subcarriers selected to a communicating party. The claimed subject matter supports reducing the number of bits to transmit when reporting information about the reception quality of a plurality of subcarriers (see specification page 7, lines 2-6 and 20-23). (It should be noted that references herein to the specification and drawings are for illustrative purposes only and are not intended to limit the scope of the invention to the referenced embodiments.)

The Office Action alleges that Frodigh discloses sending an average value of carrier to interference (C/I) measurements for a set of carriers (see Office Action page 2, Response to Arguments section, lines 4-5). The Office Action attempts to support this conclusion by stating that "Frodigh discloses averaging the C/I measurements, i.e. one result" (see page 3, lines 17-18).

However, the proposal that Frodigh discloses averaging C/I measurements to obtain one result (i.e., the average value) in no way implies that each of such C/I measurements is associated with a different subcarrier. And no such inference may be drawn from Frodigh's disclosure

because Frodigh expressly discloses that the average is obtained from multiple measurements of a single subcarrier over time.

More specifically, Frodigh discloses that a "link receiver measures C/I on each of the subset of M carriers" (see Frodigh col. 11, lines 4-5, and col. 14, lines 13-14, emphasis added) "and averages the results for each subcarrier" (see col. 14, lines 14-15, emphasis added).

Moreover, Frodigh discloses that the C/I measurement or average C/I measurement for each subcarrier is used to determine whether the subcarrier will be replaced with an unused subcarrier having better reception quality (see col. 12, lines 17-21, and abstract, last sentence); this operation would not be possible if the C/I measurements for all subcarriers were averaged to produce a single value, as proposed in the Office Action. Stated another way, it is not possible to determine which of a plurality of subcarriers has poor reception quality, relative to the other subcarriers, from a value obtained by averaging the C/I measurements of a plurality of subcarriers; instead, such a determination requires comparison of the C/I measurement or time-average C/I measurement of each subcarrier relative to the C/I measurements of the other subcarriers.

The Applicants note that Terry is not cited in the Final Rejection for supplementing the teachings of Frodigh with respect to the above-mentioned subject matter distinguishing claim 19 from Frodigh's disclosure.

Accordingly, the Applicants respectfully submit that the teachings of Frodigh and Terry, considered individually or in combination, do not render obvious the subject matter defined by claim 19. Independent claims 26 and 27 similarly recite the above-mentioned subject matter distinguishing apparatus claim 19 from the applied references, although claim 26 does so with

respect to a method. Therefore, allowance of claims 19, 26, and 27 and all claims dependent therefrom is warranted.

In view of the above, it is submitted that this application is in condition for allowance and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,

/James Edward Ledbetter/

Date: April 8, 2009  
JEL/DWW/att

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